PN-ACN-969

EVALUATION OF THE FOOD FOR EDUCATION (FFE) PROGRAM IN BANGLADESH

(October 2000-December 2000)

Data Documentation

FMRSP-IFPRI

October 2001

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1. Introduction

In order to conduct an Evaluation of the Food for Education Program in Bangladesh, the Food Management Research Support Project, International Food Research Policy Institute (FMRSP-IFPRI) conducted surveys to collect detailed data on communities, schools, households and food dealers between September 18 and October 21, 2000. The main objectives of the data collection therefore have been to provide the basis for conducting an objective assessment of the FFE program impact in terms of:

- trends in primary school enrollment by gender, teacher-student ratio, public
- expenditures;
- FFE versus non-FFE school enrollment, attendance, and drop-out rates;
- program participation;
- quality of education;
- household food security; and
- nutritional status of children and their mothers.

This document is organized as follows. In section 2 there is a brief description of the survey instruments. Section 3 provides, the sample design. The data entry and data management are discussed in section 5. In section 6 supplemental data files are outlined. Notes to potential users are presented in section 7.

2. Survey Instruments

Several instrument questionnaires were used to administer interviews at community, households and school level. The complete list of instruments along with the relative sample size is listed in Table 1.

Table 1 – List of Survey Instruments

Num.	Type of Questionnaire	N. observations
1	Village Census Questionnaire	17,134
2	School Questionnaire	110
3	Household Questionnaire-1(Male)	600
4	Household Questionnaire-2(Female)	600
5	Questionnaire for Dealer	27
6	Questionnaire for Thana Officials	23
7	Community Village level Questionnaire	240
8	Community Union level Questionnaire	60

First a complete census was carried out in all the villages selected in the sampling frame. The purpose of carrying out the census survey was dual. First, we wanted to get reliable data on the enrollment and literacy at the village level. Second we wanted to select the households for the in-depth analysis from a sample of all households including those with children enrolled in the school and those not enrolled in the school. This is in contrast with some other analysis that have selected the households from a sample of the schools.

The school questionnaire was also administered to 110 schools selected from a list of schools that have been used by some of the households in the census. The questionnaire for the schools included several dimension of the school to give an idea of the quality of the school and the current and past performance of the school in terms of the enrollment, number of scholarships and so on.

A detailed household questionnaire was used to collect information on the pattern of household structure, school attendance, expenditure, anthropometry, program participation and attitude with respect to the FFE program.

The dealer questionnaire was designed to make a detailed analysis of the cost and mode of operation of the dealers that had been selected to pick up the grain from the local government deposits and to deliver it to the program participants in the schools.
Three types of community questionnaires were used to collect information at the union and village level. The first was administered to thana level officials to gather their point of view in the implementation of the FFE programs

2.1 Household Questionnaire

The data collected includes variables necessary to describe and model several dimensions of the household to understand their level of welfare and the decision to enroll the child to school weather they receive the FFE subsidy or not. Some of the sections of the questionnaire were particularly designed to determine the attitude towards the program.

The questionnaire is organized in several parts that can be grouped in 16 main sections and several subsections. A complete copy of the questionnaire is available upon request. A brief description of the content of the questionnaire organized by the main sections is presented in box 1.

Box 1. Summary Description of the Content of the Questionnaire

1.	Household information	Information on the household roster including age, gender, civil status, etc.
2.	Education	Education level for all individuals age 6 and older, dropouts, development programs connected with the school.
3.	Housing, and sanitation	Quality of the dwelling, ownership and water
4.	Access to facilities	Access to health units and other resources
5.	FFE program	Level and the number of benefits received, currently and in the last years
6.	Assets	Inventory of household assets
7.	Income	Income sources of the household
8.	Food expenditure and consumption	Food items and meals consumed at home and away from home. For all the items that have been consumed during the last month, quantities consumed from purchases, own production and received from other sources are listed. If quantities are not known, purchase value and current price is reported.
9.	Regular and occasional non-food spending	Non-food expenditures include regular non-food spending for the past month and occasional non-food spending occurred in the past 12 months
10.	Anthropometry	Height and weight have been collected for all children below 10 years of age and all females between the ages of 13 and 45.

3. Sample Design

3.1 *General Description and Sample size*

The main goal of the sampling design was to select those villages that would give a an accurate representation of the difference between the areas in which the FFE program has been implemented and those areas in which it is not present. The communities and households used in our analysis were selected using probability sample techniques. In summary the sample included:

- Ten Thanas
- 30 Unions
- 60 Villages
- 110 Schools
- 23 Dealers
- 600 Households

The key unit of investigation at the community level was the village. In total we wanted to include 60 villages in our analysis, 40 of them from union that have the FFE program and 20 from Unions that do not have the FFE program, from a total of 10 thanas from different parts of Bangladesh.

Sampling Steps for Household and School surveys

1. First we randomly selected 10 thanas with probability proportion to size (PPS) from the list of 460 rural thanas using the population at the 1991 census.

2. Then we selected 3 unions per thana, 2 FFE unions and one non-FFE union. We also made sure that in one of the FFE union selected the program had been in introduced in 1993 and in the other the program had been introduce in 1995/1996. The non-FFE union was randomly selected among the remaining unions in the thana that were not adjacent to the selected FFE unions. [Note that on the average, a thana has about 10 unions; 2.7 unions per thana have FFE program.]

3. The two villages in each thana were also selected with PPS among the villages in each of the union, using the population census figures. [A union has about 14 villages on the average.]

4. Once we had selected the villages, we conducted a complete census of the households in each of the villages. In this way, not only we were able to learn

about the school participation, but we also created frame for the selection of schools and households for more in depth interviews. [An average village has about 350 households.]

5. For the household survey, we randomly selected 10 households from each village from the census list of households that have at least one child in the age group of >5-12 years and/or have a child who is currently enrolled in a primary school. Select a sample of 600 households for the survey.

6. For the school survey, we selected all primary schools where the children of sample households go. [The census questionnaire will include the names of primary schools.]

7. For literacy assessment, we gave a standard test to all 4th graders in all selected schools. Give the same test to all children aged 9-12 not currently enrolled in school, in each of the 60 sample villages. Assemble these children in a common place (e.g. schoolyard), and give them the test. Give the children some incentive (a gift or cash) to take the test.

8. The lists of FFE foodgrain dealers will be obtained from Thana Food Offices in the 10 survey thanas. All dealers were surveyed.

9. Thana Nirbahi officers (TNO), Education officers (TEO), and Food officers, and Union Parishad Chairmen in the 10 survey thanas were interviewed.

Table 2 - List of thanas and Unions selected

District Code	District Name	Thana	Thana Name	Union	Union Name
6	BARISAL	2	AGAILJHARA	7	BAGDA
6	BARISAL	2	AGAILJHARA	47	GAILA
6	BARISAL	2	AGAILJHARA	79	RAJIHAR
13	CHANDPUR	49	HAZIGANJ	30	DAKSHIN GANDHARBOPUR
13	CHANDPUR	49	HAZIGANJ	45	HATILA
13	CHANDPUR	49	HAZIGANJ	75	DAKSHIN RAJARGAON
22	COX'S BAZAR	16	CHAKARIA	22	BHEOLA MANIKCHAR
22	COX'S BAZAR	16	CHAKARIA	83	PEKUA
22	COX'S BAZAR	16	CHAKARIA	50	HARBANG
36	HABIGANJ	11	BANIACHONG	25	DAKSHIN PASHCHIM BANI.
36	HABIGANJ	11	BANIACHONG	69	MURADPUR
36	HABIGANJ	11	BANIACHONG	75	POILARKANDI
56	MANIKGANJ	46	MANIKGANJ S.	23	DIGHI
56	MANIKGANJ	46	MANIKGANJ S.	39	HATIPARA
56	MANIKGANJ	46	MANIKGANJ S.	71	KRISHNAPUR
64	NAOGAON	50	MAHADEVPUR	66	MAHADEVPUR
64	NAOGAON	50	MAHADEVPUR	76	RAYGAON
64	NAOGAON	50	MAHADEVPUR	95	UTTAR GRAM
65	NARAIL	28	KALIA	23	SALAMABAD
65	NARAIL	28	KALIA	63	HAMIDPUR
65	NARAIL	28	KALIA	93	KHASHIAL
73	NILPHAMARI	64	NILPHAMARI S.	6	CHAPRA SARAMJANI
73	NILPHAMARI	64	NILPHAMARI S.	37	KACHU KATA
73	NILPHAMARI	64	NILPHAMARI S.	69	PALASH BARI
89	SHERPUR	88	SHERPUR S.	6	BAJITKHILA
89	SHERPUR	88	SHERPUR S.	13	BAILAR CHAR
89	SHERPUR	88	SHERPUR S.	27	CHOR MOCHARIA
93	TANGAIL	57	MADHUPUR	28	AUSHNARA
93	TANGAIL	57	MADHUPUR	38	BIRTARA
93	TANGAIL	57	MADHUPUR	19	SOLAKURI

3.1 Non *response and replacement procedure*

The original sample was done without replacement and the interviewers were instructed not to replace households that were not found or that refused to participate in the study. A total of 600 households participated in the study.

4. Organization and Procedure of Fieldwork

4.1 *Structure of the interview*

Separate male and female questionnaires were administered in the households.

The male questionnaire dealing with labor and agriculture section took about 2 hours and 45 minutes (on average) to complete. The female questionnaire, centered mostly on the food purchase, allocation and intake of food in the past 24 hours, took about 2 hours 30 minutes (on average) to complete

4.2 *Structure of survey teams*

A total of 2 survey teams were used for the data collection. Each team included a field supervisor, three male interviewers, three female interviewers and a driver. In total four supervisors and twenty-eight interviewers worked on the survey.

The quality of the interviewers was very high. Most of the interviewers had a university degree. Most of them had been experienced widely in data collection with different international organizations.

4.3 *Training*

The majority of the training took place in DATA office and in the field. The training includes detailed discussions of the questionnaire over a period of five days, some practice interviews under the supervision of the trainers and discussions of the completed practice interviews. Following the in-house training at the FMRSP office, the questionnaires were pre=tested in five locations

5. Data Entry / management

5.1 *Data Entry Program and Verification*

The data entry program was designed using IMPS, a data entry package developed by the US Census Bureau. The program was designed in such a way to follow the same layout of the questionnaire and allowed three types of data checks:

a) range checks,
b) intra-record checks to verify inconsistencies pertinent to a particular section of the questionnaire and
c) inter-record checks to determine inconsistencies between the different sections of the questionnaire.

Some detailed checks were performed to verify the wage level, food prices and also if the per capita quantities of food were inside some acceptable ranges. The program for the checking the first two types of errors was performed while the data were entered in the computer. The inter-record checks were performed for one or more households at one time, after the data were entered in the computers. (The original IMPS dictionary of variables and the program for error checking is available upon request).

5.2 *Data Entry Operations*

The screen layouts of the data entry and the error messages were in English. The data were entered in FMRSP-IFPRI office in Dhaka, by seven data entry operators. The data entered using IMPS are be stored in files that contain the data relative to one or more household questionnaires. In this case it was decided to group the households by union, where the data were collected. This facilitated the management of the data and the checking of the errors for the inter-record checks. The error report relative to each union was given to the supervisor that worked in that area who was responsible for the . Revisits to the households were not done on a routine base.

5.3 *Organization of Data for Analysis*

Once the data had been collected and checked with the data entry program the data files for the analysis were prepared. A special custom program, designed in Power Basic, was prepared to read the original IMPS files, to rearrange them according to the sections of the questionnaire, to add additional labeling information and to create the programs used by the statistical packages to import the data. While it is convenient to store the data at household level when the data are entered (facilitate running inter-record checks), it is difficult to use it in that fashion to analyze it. The original data files from the household are grouped in to files organized according to the sections of the questionnaire.

5.4 *Preliminary data cleaning*

The data cleaning was done at three points in time. First the data was checked at the time of the data entry, then was checked for each round with error checking programs

written in STATA, then the data from the three rounds was checked to make sure that the data was consistent.

6. Organization of electronic data files - Original data files

6.1 *Description*

The electronic data files relative to the household questionnaire comprise a group of 21 hierarchical data files. The pattern of data files and names of the original files follow the same pattern and structure of the questionnaire. Some of the files are organized at the household level, some of them at the individual level and some of them at the food commodity level and so on. The data relative to the other questionnaires have been organized in several individual hierarchical files as well to facilitate the data management and the data analysis.

Each file contains identification variables that allow for the merging and matching of the information to create new files that contain the variables needed for the analysis. A detailed list of the original files is box 3.

Box 3. Original data files

Census

Name	Size	Description
Ffecensus		Total Household Size, Number of Children not going to School, Number of Individuals that can sign, Number of Children getting FFE or not.

School Files

File Name		Description
School_SA		Information About School Category , Type,Enlisted in FFE or not , Selected Thana, Union & Village, Attendance of Teachers & Students.
School_SB		Student Enrollment by Year & Class.
School_SC1		Drop Out for Non-FFE School.
School_SC2		Drop Out for FFE School.
School_SD1		Total Number of Male & Female Teachers by Year.
School_SD2		General Information About School-Teacher's Training,Examination System, Uniform & Fee of the Students, Shift of Classes, Tiffin, Parent's Participation etc.
School_SD3		School Structure-Material of the Wall, Floor & Roof, Number & Condition of Classrooms, Canteen,Toilet,

		Blackboard, Play Ground, Library.
School_SD41		School's Other Facilities-Electricity, Water Supply, Road connecting to School.
School_SD42		Student's Seat Capacity
School_SE		Individual Teacher; Information-Their Age, Educational Qualification, Salaty, Income, Expenditure, Year Joining.
School_SF1		School Income-Incomr from Govt.Assistance, Student;s Fee,NGO or Community Assistance, Donation.
School_SF2		School Expenditure-School Building Rent, Education or Administrative Material, Water, Electricity Bill, Furniture, Telephone Bill, Maintanance.
School_SG		Information for Non-FFE School-Students go away from Non-FFE School to FFE School.
School_SH		Information for FFE School-Selection Criterio for FFE Student, Quality of Education after introducing FFE< Comparison between SMC & Dealers.
School_SI		Scholarship Examination of the Students-How many Male & Female Students Appeared & How many Got by Year.
School_SJ		Stipend Program for Non-FFE Schools-When introduced & how many enlisted by Male & Female.

School Test data

Testschool		Test taken of the Students of Class 4 in Selected Schools & the Number they got.
Testhhold		Test taken of the children in the household of Class 3, 4 & 5 & the Number they got.

Household Files

File Name		**Description**
Sec00		Cover page of Household questionnaire: Information about thana, union, village & GPS distance of every household
SecA1		Individual information of household members.
SecA2A		Household members educational information.
SecA2B		Educational information of non-members.
Sec2		Households living conditions & hygenation.
Sec3		General Information About Social institutions.
Sec4a		Information about FFE Program for beneficiary households.
Sec4b		Information about FFE Program for non-beneficiary households.
Sec4c1		Utilization of foodgrains after included in FFE Program.
Sec4c2		Distribution of foodgrains received from social institutes.
Sec4c3		Consumption of Rice & Wheat before included in FFE Program.
Sec4d		Participation of the Children in the FFE Program.
Sec4e		Activities of the Children before the FFE Program
Sec4f		Comparison between SMC & Dealers.
Sec5		Information on Cash Program for Non-FFE Unions.
Sec6a		Ownership of Lands of Households.
Sec6b1		Value of Assets of Households.
Sec7		Information on Income of the Household.
Sec8		Information on Food expenditure.
Sec9		Information on Non-food expenditure.
Sec10		Anthropometrical Information.

Dealer Files

File Name		**Description**
Dealer_S1		General Information on Dealers.
Dealer_S2		Land ownership, Assets & Occupations of Dealers.
Dealer_S3		Income information of Dealers.
Dealer_S4		Information on FFE Program.
Dealer_S5		Breakdown of Cost.
Dealer_S6		Information on Revenue from foodgrain distribution
Dealer_S7		Information on Distribution System.

Community Level Data

Thana_Q		Information on Thana Officials.
C_Union		Community Union Level Information-Total Population of the Union, Program Intervention & People Participating.

Community Village Files

File Name		**Description**
Villg_S1		General Information on Villages.
Villg_S2		Information on Migration Pattern of Villages.
Villg_S3		Information on Economic Activity & Agriculture.
Villg_S4		Information on Commodity Prices.
Villg_S5		Information on Cropping Pattern of Villages.
Villg_S6		Information on Cropping Intensity of Villages.
Villg_S7		Information on Agricultural Technology Adoptiopn.
Villg_S8		Existence of Facilities.
Villg_S9		Availability of Infrastructures.
Villg_S10		Communication Facilities.
Villg_S11		Information on Health Facilities.
Villg_S12		Information on Education Facilities.
Villg_S13		Information on Other Facilities.
Villg_S14		Information on Program Intervention.
Villg_S15		Information on NGO Coverage & Disaster.
Villg_S16		Information on Price of Essential Commodities.

6.2 *Documentation, Codebook and summary statistics*

The questionnaire contains most information about the data. The questions have been laid out clearly and the interviewers were asked to follow the questions literally. Most instructions are printed in the respective sections. Most of the codes are included in the box relative to the question. In a few cases they are reported in a box on the same page where the questions are asked.

There has been an intensive use of skip patterns to facilitate the data collection and minimize the time spent filling the questionnaire. Skip patterns are represented by an arrow followed by the number which refers the next question to be asked or the next section (→8). In all the cases, data in the skipped questions will appear as missing. Truly missing values refer only to the questions that were not supposed to be skipped and that received no answers.

Simple description of files, variables and code labels along with the simple

summary statistics are provided in the text and MS Word format. These summary statistics can be used to provide a basic understanding of the data before they are used for analysis. They are also very important to verify the integrity of the data and insure that the data has not been modified. (Note that a small translation mistake from one format to another cam change the nature of data files.)

6.3 *Missing data and other Special codes, Data sets*

Missing values have been left blank on the forms and they are treated as "." (dot) in most statistical packages. Refer to the statistical package used to get more details about their treatment. For example, in STATA they are not used to calculate sample statistics and they are assumed to be the largest numbers in the data set. In a very few cases special codes "99" or "98" have been used to highlight special situations. These are clearly marked in the questionnaire.

6.4 *Merging data from different data sets*

The data set is organized in several files of different levels of aggregation. Each household can be uniquely identified using the household identification variable ***hhnum*** (HouseHold Number). This is a variable made of 6 digits. The first digit refers to the code for Thana (administrative unit) of the household. The following two digits refer to the code of the Union (administrative unit) of the household .The fourth digit refers to the code for the Village of the household and finally the last two digits refer to the sequential identification of the household.

The ***hhnum*** is the only identifier for household level files. Individual level files have an individual code in addition to the household code: *pcode* (Individual id code). Of course, all the individuals in the same households share the same household code. This allows to clearly identify the information relative to each individual in the data set. Similarly, other files of a different level of aggregation have additional identifiers. For example the food expenditure files have a unique code for each commodity that has been consumed by the households *fooditem* (code of food).

This method assures that the data are stored in the most efficient way and that the necessary information can be easily combined in the analysis to compare the existing

variables and to create additional ones. Household level files can be joined together to combine variables from different files using the variable *hhnum*. Similarly, individual level files can be merged together to perform some analysis in which the information on age, education level and wage rate is needed. In this case the key variables would be *hhnum* and *pcode*. Of course it is also possible to add household level information to an individual level file or a commodity level file. The only caveat is to be careful about the keys that are used to sort and merge the data to make sure that the resulting file contains the data for the same individual, household etc.

7. Notes to Potential Users

7.1 *Obtaining the data*

The data set is property of the FMRSP-IPPRI and the World Bank. Those interested in using the data should contact Dr. Akhter Ahmed at the International Food Policy Research Institute (A.Ahmed @cgiar.org).

7.3 *Data formats*

The data have been stored and analyzed using the statistical package STATA.

APPENDIX A

List of documents available upon request

- Questionnaires
- Field interviewers manual
- Original IMPS codebook
- IMPS data checking program
- Summary statistics of data files
- Programs to generate secondary files